



Europäisches  
Patentamt  
European  
Patent Office  
Office européen  
des brevets

## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 90 58 39

### Classification of the application (IPC):

*F21S 43/31, F21S 43/40, B60Q 1/30, B60Q 1/50, F21S 43/14, F21S 43/16,  
F21S 43/20, F21S 43/50, F21S 45/70, F21W 103/00, F21W 103/35,  
F21W 104/00, F21Y 115/10, F21Y 115/30, B60Q 1/26, B60Q 1/28*

### Technical fields searched (IPC):

B60Q, F21S

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	EP 3527426 A1 (AUDI AG [DE]) 21 August 2019 (2019-08-21)	1-4, 6-8
Y	* paragraphs [0001] - [0053]; figures 1-4 *	5, 9, 16, 19
Y	KR 20100043505 A (RENAULT SAMSUNG MOTORS CO LTD [KR]) 29 April 2010 (2010-04-29) * see attached machine translation; paragraphs [0001] - [0032]; figures 1-5 *	5
Y	DE 102017002920 A1 (GM GLOBAL TECH OPERATIONS LLC [US]) 27 September 2018 (2018-09-27) * paragraphs [0001], [0048] - [0098]; figures 1-3 *	9, 20
X	US 3848974 A (HOSKING J ET AL) 19 November 1974 (1974-11-19) * column 2, line 43 - column 8, line 64; figures 1-9 *	1-4, 6, 7
X	US 2014254186 A1 (TERAI HIDEAKI [JP] ET AL) 11 September 2014 (2014-09-11) * paragraphs [0002], [0018] - [0038]; figures 1-5 *	1-4
X	US 2019310486 A1 (FERRI JAMES J [CA]) 10 October 2019 (2019-10-10) * paragraphs [0037] - [0048]; figures 2-7c *	1, 3, 5
X	JP 2012099279 A (SHARP KK) 24 May 2012 (2012-05-24)	10-12, 17
Y	* paragraphs [0065], [0066], [0078] - [0083], [0097] - [0104], [0106], [0119] - [0128]; figures 1-5 * * see attached machine translation; paragraphs [0135] - [0138], [0147] - [0153] *	13-16, 18, 19
Y	EP 1528527 A1 (CT RICERCHE PLAST OPTICA S R L [IT]) 04 May 2005 (2005-05-04) * paragraph [0016]; figure 6 *	13

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 15 December 2023	Examiner Goltes, Matjaz
---------------------------	------------------------------------------------------	----------------------------

### CATEGORY OF CITED DOCUMENTS

- |                                                                                 |                                                                        |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------|
| X: particularly relevant if taken alone                                         | P: intermediate document                                               |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention                        |
| A: technological background                                                     | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure                                                       | D: document cited in the application                                   |
| & : member of the same patent family, corresponding document                    | L: document cited for other reasons                                    |

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 90 58 39

### DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y	WO 2013134804 A1 (ZIZALA LICHTSYSTEME GMBH [AT]) 19 September 2013 (2013-09-19) * page 4, paragraph 2; figure 1 * * page 8, paragraph 3 - page 9, paragraph 1 *	14, 18
Y	US 2017122515 A1 (BHAKTA VIKRANT R [US]) 04 May 2017 (2017-05-04) * paragraphs [0002], [0044]; figure 2 *	15
X	EP 3355664 A1 (ODELO GMBH [DE]) 01 August 2018 (2018-08-01)	17, 18
Y	* paragraphs [0002], [0055] - [0127]; figures 1-10 *	20
A	CN 107631266 A (FORD GLOBAL TECH LLC) 26 January 2018 (2018-01-26) * see attached machine translation; figures 1-9 *	10, 14

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 15 December 2023	Examiner Goltes, Matjaz
---------------------------	------------------------------------------------------	----------------------------

### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 90 58 39

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-9

Claims 1-9 refer to details about the reflective portion of the vehicle lighting fixture

2. claims: 10-20

Claims 10-20 refer to details regarding the filtering of the excitation light

3. claims: 21-24

Claims 21-24 refer to details regarding a design member

Only part of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims: 1-20

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 15 December 2023	Examiner Goltes, Matjaz
---------------------------	------------------------------------------------------	----------------------------

### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 90 58 39

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 15-12-2023  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 3527426	A1	21-08-2019	DE	102018202384 A1	22-08-2019
			EP	3527426 A1	21-08-2019
KR 20100043505	A	29-04-2010	NONE		
DE 102017002920	A1	27-09-2018	NONE		
US 3848974	A	19-11-1974	DE	2304175 A1	09-08-1973
			FR	2169403 A1	07-09-1973
			GB	1418891 A	24-12-1975
			IT	980406 B	30-09-1974
			JP	S4887534 A	17-11-1973
			NL	7301149 A	31-07-1973
			SE	392442 B	28-03-1977
			US	3848974 A	19-11-1974
US 2014254186	A1	11-09-2014	CN	104048236 A	17-09-2014
			DE	102014204415 A1	11-09-2014
			JP	5945238 B2	05-07-2016
			JP	2014175199 A	22-09-2014
			US	2014254186 A1	11-09-2014
US 2019310486	A1	10-10-2019	CN	110349523 A	18-10-2019
			DE	102019108974 A1	10-10-2019
			US	2019310486 A1	10-10-2019
JP 2012099279	A	24-05-2012	CN	102466188 A	23-05-2012
			JP	2012099279 A	24-05-2012
			US	2012106185 A1	03-05-2012
EP 1528527	A1	04-05-2005	AT	E342561 T1	15-11-2006
			CN	1611830 A	04-05-2005
			DE	602004002746 T2	01-02-2007
			EP	1528527 A1	04-05-2005
			ES	2274355 T3	16-05-2007
			JP	4128167 B2	30-07-2008
			JP	2005135904 A	26-05-2005
			US	2005094404 A1	05-05-2005



## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 90 58 39

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 15-12-2023  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date	
WO2013134804	A1	19-09-2013	AT	512591 A1	15-09-2013
			BR	112014010269 A2	18-04-2017
			CN	104160208 A	19-11-2014
			EP	2745042 A1	25-06-2014
			JP	6103446 B2	29-03-2017
			JP	6176463 B2	09-08-2017
			JP	2015502628 A	22-01-2015
			JP	2016028397 A	25-02-2016
			US	2014321148 A1	30-10-2014
			WO	2013134804 A1	19-09-2013
			US 2017122515	A1	04-05-2017
US	2017122515 A1	04-05-2017			
WO	2017075506 A1	04-05-2017			
EP 3355664	A1	01-08-2018	NONE		
CN 107631266	A	26-01-2018	CN	107631266 A	26-01-2018
			DE	202017104097 U1	30-07-2017
			US	2018015887 A1	18-01-2018